

REMARKS

Claims 1-3, 5, 6, 8-10, and 12 are pending. Claim 1 is the only independent claim.

The Examiner rejects claims 1-3, and 6 as allegedly anticipated by US Patent No. 4,338,002 (hereinafter "Gafert"), rejects claims 1, 2, 5, 6, 10, and 12 as allegedly anticipated by US Patent Publication No. 2002/0140899 (hereinafter "Blum"), and further rejects claims 8 and 9 as allegedly obvious in view of Blum. These rejections are respectfully traversed.

Claim 1 is directed to: "A method for measuring the behavior of the head and eyes of a spectacle wearer looking at a target." Each spectacle wearer has his own propensity to move his head or his eyes to varying degrees. In progressive lens design, a wearer who tends to move his head requires a gentler progression than a wearer who tends to move his eyes. In order to measure individual behavior and customize a progressive lens design to a particular user, claim 1 generally involves the following steps.

First, a spectacle wearer is provided with a lens that has at least two regions and views a target through the lens. The lens regions are configured so that a view of the target through one region of the lens is different from a view of the target through an adjacent region of the lens. For example, in one embodiment, the lens is split up into various vertical regions with each region painted different colors. See, for example, FIG. 4 and page 5, lines 20-30. The target appears red if it is viewed through a red region; blue if it is viewed through a blue region.

Second, based on how the spectacle wearer perceives the target, the region of the lens through which the spectacle wearer sees the target is determined. For example, in the embodiment mentioned above, if the wearer sees the target as red, it is determined that the wearer sees the target through the red region.

Third, the wearer's head and eye movement as a function of the determined region is calculated. For example, if it is determined that the wearer is looking at the target through the red region, then the rotation of his eyes, i.e., the angle between the main direction of vision and the red region (represented by angle α in FIG. 3) can be calculated. The rotation of his head (represented by angle β in FIG. 3) can be derived from angle α and the target's angular position.

Claim 1 patentably distinguishes Gafert because Gafert does not teach or suggest “calculating the spectacle wearer’s head and eye movement as a function of the region determined,” as claimed in claim 1.

Instead, Gafert describes determining the position of the close-range or reading range regions of pantoscopic eyeglasses. This determination of the position is required because of the relatively small size of the close-range region and also because the position differs according to the wearer (Col. 1, line 56 to Col. 2, line 3). In use, the good position of the close-range region corresponds to a position which enables the examinee to read without moving his head (Col. 5, lines 42-49). Accordingly, there is no calculation of the spectacle wearer’s head and eye movement as a function of one of a plurality of lens regions through which it is determined that the wearer sees a target.

In fact, Gafert’s method precludes such calculations because Gafert states that his method is performed while “the examinee holds his head in a steady position” (Col. 5, line 43, emphasis added). Thus, Gafert’s method explicitly prevents the calculation of any head movement.

Accordingly, we ask the Examiner to withdraw the rejection of claim 1 based on Gafert. Claim 1 also patentably distinguishes Blum.

Blum describes a hybrid lens that is used to correct conventional and non-conventional refractive errors to improve wearers’ vision. For example, Blum states:

In the inventive embodiments whereby aberrations, irregular astigmatism, and/or ocular layer irregularities of the eye are corrected in addition to conventional refractive error, one’s vision can be corrected in many cases to better than 20/20, such as to 20/15, to better than 20/15, to 20/10, and/or to better than 20/10 [paragraph 81, lines 11-15].

The hybrid lens in Blum has at least one region that is made of electro-active materials and at least one region that is of conventional lens optic. Different regions on the hybrid lens in Blum are constructed to achieve certain advantages, such as “lower electrical power needs, smaller battery size, longer battery life expectancy...” (Blum, paragraph 99, lines 3 – 8).

However, there is no teaching or suggestion in Blum to use different regions of lens in the manner claimed in claim 1. Specifically, there is no teaching or suggestion to “determining the region of the lens through which the spectacle wearer sees the target depending on how the

spectacle wearer perceives the target, and calculating the spectacle wearer's head and eye movement as a function of the region determined," as required by claim 1.

To the contrary, Blum tracks a spectacle wearer's head and eye movement by using a micro-gyroscope and a tracking system. For example, paragraph 204 of Blum states that:

"..., the switch can be controlled by a small but rapid movement of the user's head. This would be accomplished by including a tiny micro-gyroscope or micro-accelerometer in the temple on the lens frames. A small, rapid shake or twist of the head would trigger the micro-gyro or micro-accelerometer and cause the switch to rotate through its allowed position settings, changing the focus of the electro-active lens to the desired correction."

Paragraph 117 of Blum states that:

Attached to the backside of electro-active lens 1420 (that side closest to the wearer's eyes, also referred to as the proximal side), are a tracking signal sources 1430, such as light emitting diodes. ... Utilizing this approach it is possible to locate very precisely the eye movements up, down, right, left and any variation thereof.

Thus, there is no reason for Blum to "determine[e] a region of the lens through which the spectacle wearer perceives the target, and calculate[e] the spectacle wearers head and eye movement as a function of the region determined," as recited in claim 1, because Blum uses a separate micro-gyroscope and tracking system to track the wearer's head and eye movement. Accordingly, we ask the Examiner to withdraw the rejection of claim 1 over Blum.

The dependent claims 2-3, 5-6, 8-10, and 12 are patentable for at least the same reasons as those set forth above for independent claim 1.

In view of the above, we ask the Examiner to allow the application.

Canceled claims have been canceled without prejudice or disclaimer.

Any circumstance in which the applicant has (a) addressed certain comments of the Examiner does not mean that the applicant concedes other comments of the Examiner, (b) made arguments for the patentability of some claims does not mean that there are not other good reasons for patentability of those claims and other claims, or (c) amended or canceled a claim does not mean that the applicant concedes any of the Examiner's positions with respect to that claim or other claims.

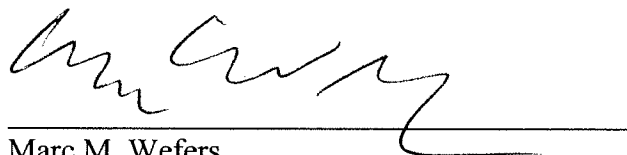
Applicant : Thierry Bonnin
Serial No. : 10/583,173
Filed : November 1, 2006
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Attorney's Docket No.: 08641-038US1 / 21639US ESS

Please apply any required fees or make any credits to Deposit Account No. 06-1050,
referencing 08641-038US1.

Date: 5/12/08

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